

National Aeronautics and Space Administration



program plan



www.nasa.gov



2007

The NASA Mission

To pioneer the future in space exploration, scientific discovery and aeronautics research.

The NASA Strategic Goals

- *Fly the Shuttle as safely as possible until its retirement, not later than 2010.*
- *Complete the International Space Station in a manner consistent with NASA's International Partner commitments and the needs of human exploration.*
- *Develop a balanced overall program of science, exploration, and aeronautics consistent with the redirection of the human spaceflight program to focus on exploration.*
- *Bring a new Crew Exploration Vehicle into service as soon as possible after Shuttle retirement.*
- *Encourage the pursuit of appropriate partnerships with the emerging commercial space sector.*
- *Establish a lunar return program having the maximum possible utility for later missions to Mars and other destinations.*

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December 2006



Dear Colleagues:

NASA's Space Flight Awareness (SFA) Program has a proud history of over 40 years in recognizing achievement in quality, safety and mission success. Through the challenges of the past few years, SFA has infused our human space flight program with a renewed and strengthened consciousness of how teamwork, commitment to excellence and diligence contribute to flight safety.

The past year has been a resounding success for NASA's human space flight program. On July 4, 2006, the crew of STS-121 launched the second return to flight mission, delivering supplies and preparing the International Space Station (ISS) for future expansion. Space Shuttle Discovery also carried European Space Agency Astronaut Thomas Reiter to the ISS, returning it to a three-person crew for the first time since May 2003.

Space Shuttle Atlantis was launched into space on September 9, 2006, returning us to full-time assembly of the ISS. The crew of STS-115 carried up a truss segment housing solar arrays to provide additional electrical power for the ISS. They conducted three spacewalks, two of them back to back, to install and activate the arrays. The delivery of the arrays sets the stage for the addition of the European and Japanese laboratories, which will in turn increase our research capability.

These two missions also proved inspection and repair capabilities, helping to ensure the safe flight of the Space Shuttle fleet for the next four years of operation. The human space flight program is better and safer because of our work this year. SFA recognizes the efforts of those who have made significant contributions to the Shuttle's safe return to flight and in sustaining the ISS and our expedition crews.

Herbert Hoover, our nation's 31st President and himself an engineer, said:

"To the engineer falls the job of clothing the bare bones of science with life, comfort, and hope. No doubt as years go by the people forget which engineer did it, even if they ever knew. . . But the engineer himself looks back at the unending stream of goodness which flows from his successes with satisfactions that few professions may know. And the verdict of his fellow professionals is all the accolade he wants."

The next year will be an exciting one as we continue assembly on the International Space Station and move forward with plans for future space flight missions. STS-116, STS-117 and STS-118 will continue assembly work on the ISS, and STS-118 will carry our first Educator Astronaut, Mission Specialist Barbara Morgan, into space.

Our future SFA Program will continue to recognize the successes of our human space flight workforce, affording our fellow professionals accolades for their significant contributions. As we build the next generation of spacecraft, launch vehicles and begin our new program of space exploration, SFA will continue to be an important partner. The SFA program is a shining example of collaboration and I offer thanks to the many organizations that contribute to its success. I would also like to thank the SFA National Panel Members whose diligence and hard work makes the SFA program possible. I look forward to the achievements of the coming year.

A handwritten signature in black ink, appearing to read "William A. Gustenmaier". The signature is fluid and cursive.

Associate Administrator for Space Operations

2007

SPACE FLIGHT AWARENESS MOTIVATION AND RECOGNITION PROGRAM HISTORY

NASA established the Space Flight Awareness (SFA) Motivation and Recognition Program as a formal program after the Mercury and Gemini period, to infuse the space program with a renewed and strengthened consciousness of quality and flight safety.

As NASA's human space flight program continued and developed, the NASA Centers increased the assistance they provided to the employee motivation programs of their contractors and other government agencies.

The future of space flight brings new opportunities and challenges for the SFA Program. The program must keep pace with an ever-changing environment of people, systems, and processes that design, build, fly and support human space flight.

The National SFA Panel works diligently to ensure an effective program, one of value to the human space flight workforces. The focus of the program continues to be excellence in quality and safety.

SFA Awards recognize outstanding job performance and contributions of the human space flight workforce.





Objectives

- Ensure employees involved in space flight are aware of the importance of their role in promoting safety, quality and mission success
- Increase awareness of the Space Flight Program accomplishments, milestones and objectives with a focus on safety and mission success
- Conduct events and produce products that motivate and recognize the workforce, and enhance employee morale
- Function as an internal communications team to disseminate key program safety, quality, and mission success messages and themes
- Provide management with resources to energize workforce during transition from the shuttle program to the next generation of space flight programs
- Continue supplier outreach programs



Bridging the Gap

Space Shuttle

- Keep workforce focused on the safety and missions at hand
- Foster and retain personal commitment to flight safety and mission success



International Space Station

- Increase Station visibility and continue to recognize significant milestones as we move forward with our international partners

Space Exploration

- Position Space Flight Awareness to support the Vision for Space Exploration



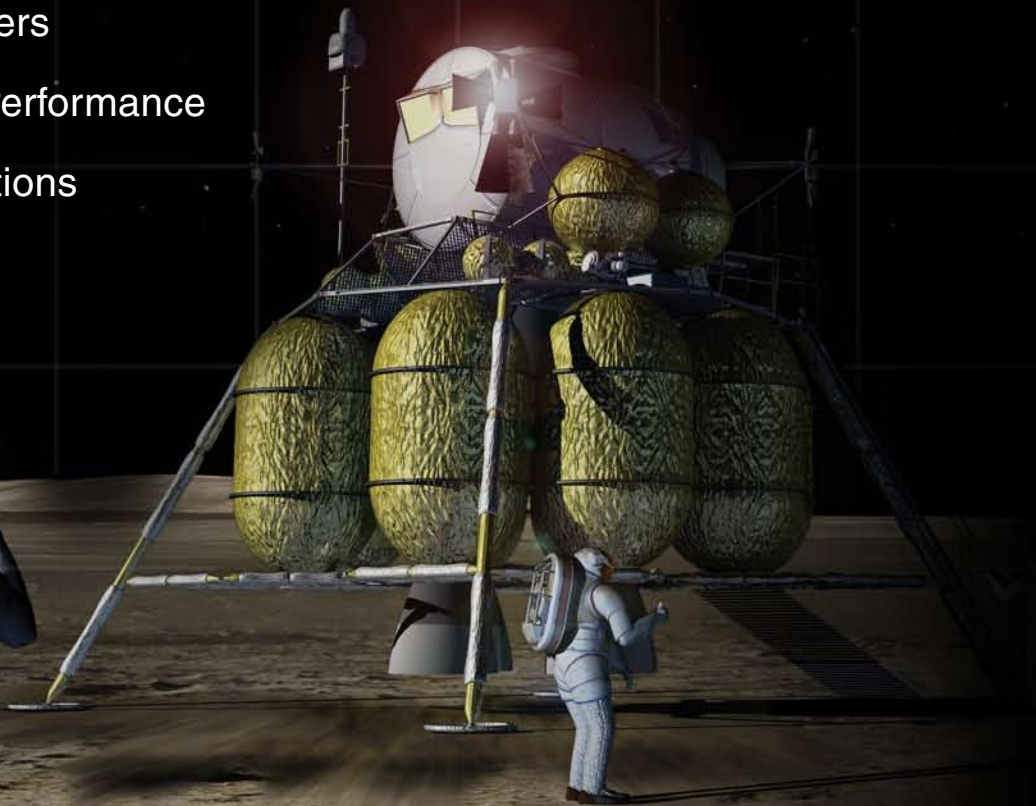
2007

SFA Teams

Space Flight Awareness Teams

- Products
- Program Plan
- 3-5 Year Plan
- Suppliers
- Cost Performance
- Allocations

space flight awareness



2007

Proposed Honoree Events

january

1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

february

1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28

march

STS-117: MARCH-2007

1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

april

1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30

may

1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31

june

STS-118: JUN-2007

1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30

july

1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31

august

1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31

september

STS-120: SEPTEMBER 2007

1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30

october

1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30 31

november

1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

december

1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31

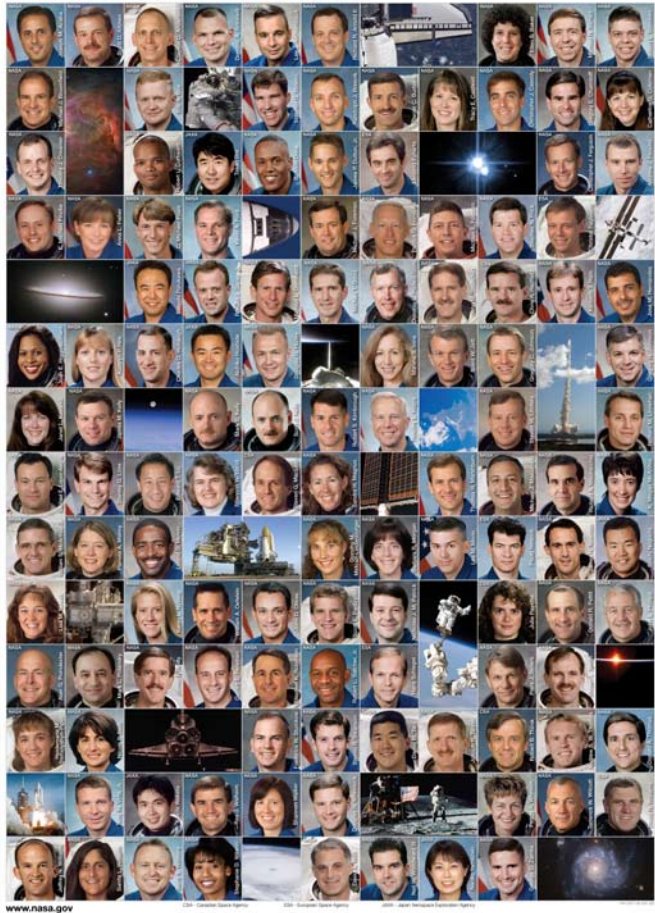
2007

Program Products

National Aeronautics and Space Administration



2006-2007 Astronauts



Astronaut Poster



Safety Posters

National Aeronautics and Space Administration



SPOTLIGHT

A-1, A-2 Test Stands



Construction on SSC's A-2 Test Stand began in 1964. Excavation for the stand's foundation went down 50 feet, with steel pilings driven another 100 feet to form a framework for the massive amounts of steel rods and concrete that form the stand's base.



A large stack at SSC's A-2 Test Stand burns off excess propellant after testing a space shuttle main engine.



Fueled by super-cold liquid hydrogen, and oxidized by liquid oxygen, the only byproduct of a space shuttle main engine test on the A-1 test stand is ultra-pure steam.

Cover Photo: A recent space shuttle main engine test lights up the sky over SSC's A-2 Test Stand.

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A-1 and A-2 are two of three rocket engine test stands built at NASA's Stennis Space Center in the early 1960s to test the first and second stages of the Apollo-Saturn V rocket that safely transported Americans to the moon. Construction on A-2 began in 1963, and on April 23, 1966, the first static firing of the Saturn V second-stage prototype engine (S-8-T) was conducted there.

That testing led to one of humankind's most phenomenal achievements when Apollo 11 Astronauts Neil Armstrong and Buzz Aldrin first set foot on the lunar surface July 20, 1969.

When the Apollo Program ended, A-1 and A-2 were converted from the Apollo-Saturn V configuration to accommodate testing of space shuttle main engines. On June 24, 1975, the A-1 stand had the first full-duration test-firing of an SSME. Less than a year later, A-2 followed suit with its first SSME test April 1, 1976.

Both A-1 and A-2 are supplied with cryogenic fluids, hydrogen and inert gases, industrial water and electrical power necessary for test operations. They are single-position, vertical-firing stands capable of static firing a test article up to 33 feet in diameter.

Liquid hydrogen and liquid oxygen are supplied to the stands from cryogenic transportation barges, and are fed to the test article from on-stand run tanks. Simultaneous resupply of the cryogenics from barge to run tank makes it possible to conduct extended-duration test operations.

The barges navigate between the test stands via a 7½-mile manmade canal system that connects the rocket engine test complex to the Pearl River, giving SSC access to the Gulf of Mexico. The canals are kept at a constant level by a lock system, spillway and replenishment pumps.

Gaseous hydrogen is provided as a pressurant for the liquid hydrogen run tank systems, and gaseous nitrogen is provided as a pressurant for the liquid oxygen systems. Both stands are operated from a common Test Control Center configured with separate systems, and both utilize the resources of the Data Acquisition Facility.

On Jan. 21, 2004, a milestone in human spaceflight was achieved when the 1 millionth second of successful test and flight operations of an SSME took place on the A-2 Test Stand. In 2006, SSC marked its 40th anniversary of testing SSMEs. A milestone for the A-1 Test Stand took place Aug. 17, 2006: the 1,000th SSME test conducted on that facility.

In October 2006, A-1 will begin undergoing modifications to convert from SSME testing to accommodate testing of NASA's Constellation Program's J-2X engine that will help return Americans to the moon.

Test Stand Statistics:

- Height: 274.9 feet
- Propellants: Liquid hydrogen, liquid oxygen
- Fuel supply vessels: Low-pressure run tanks, barges for resupply
- Maximum dynamic load: 1.1 million pounds of force
- Engines tested: Space Shuttle Main Engine, Linear Aerospike, Saturn V boosters
- Future engine: J-2X

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Spotlights on Hardware



Mission Flags



Decals



Coins



Silver Snoopy

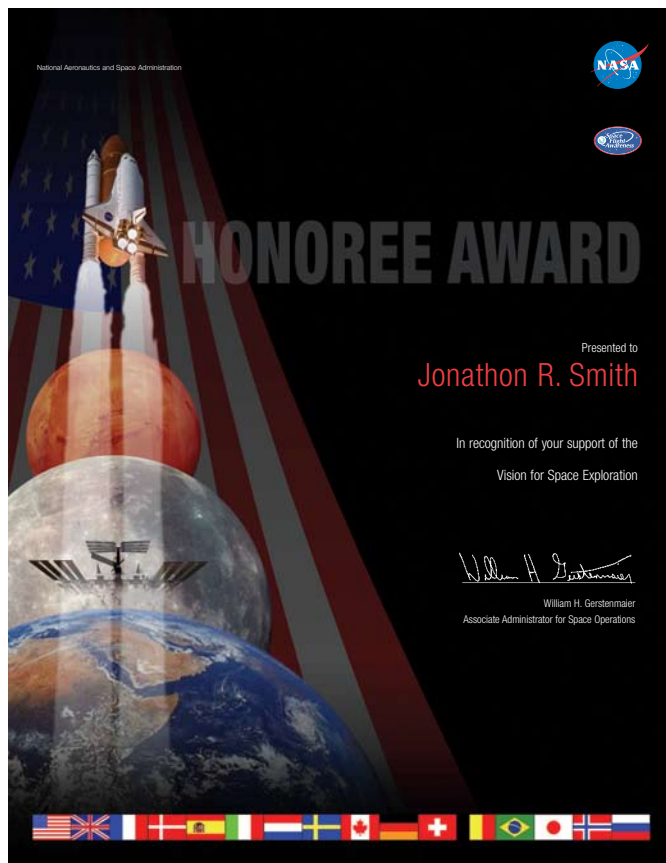
Product development maximizes safety awareness, motivation and recognition.



Calendar



Banners



Recognition Events



Memorbillia



Mission Posters



Flyers



Pins

2007

SFA Products

Shuttle Mission Products

- Gate Banner
- Crew Litho
- Decals Pins
- Pop-Ups Crew
- Posters
- Mission Flags

International Space Station Products

- Gate Banner
- Expedition Fact Sheet
- Decals
- Pins
- Crew Posters

Web-Based Awareness Products

- SFA Award Products
- SFA Honoree Award
- Leadership award

Posters

- Astronaut Poster
- Focus on the Mission
- Celebrate ISS Node II Completion
- Safety - Shuttle Poster
- Hubble

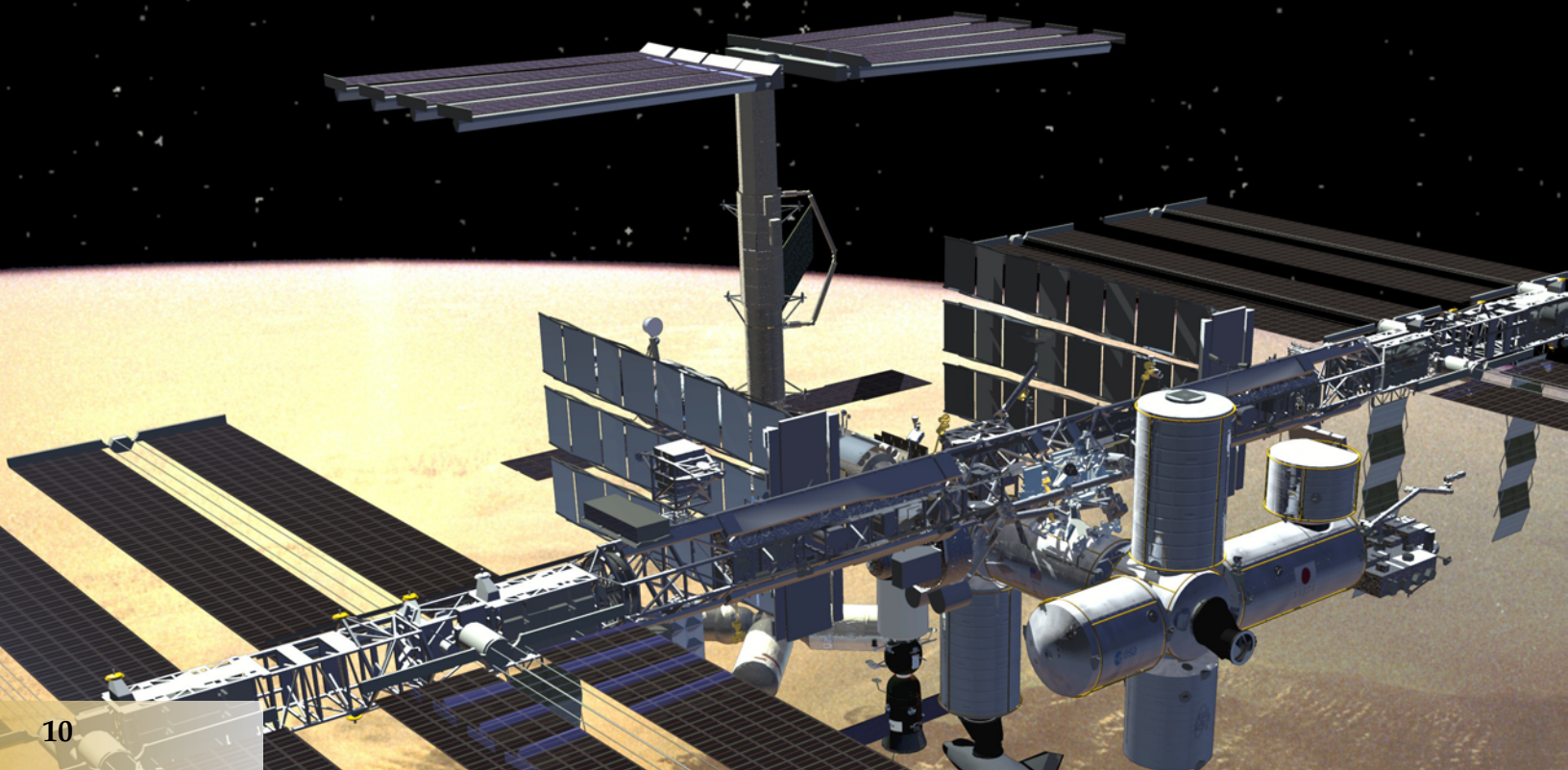
T-shirt

- Completion of ISS Node II

2007 Calendar of Events

Awareness Educational Products

- Hubble bookmark
- Manager Tool - SFA





Alotta Taylor,
NASA Headquarters, Acting Program Manager
Russell Arthur, Lockheed Martin Space System Co
Claudette Beggs, NASA Kennedy Space Center
Sallie Bilbo, NASA Stennis Space Center
Joan Broadfoot, NASA Johnson Space Center
Dawn Brooks, NASA Headquarters
Chryel Coker, United Space Alliance
Fred Hendricks, ATK Launch Systems
Bill Johnson, The Boeing Company
Amy Pruett, NASA Goddard Space Flight Center
Elizabeth Torres, NASA Johnson Space Center
Agnes Vargas, The Boeing Company
Shelby Weathers, NASA Marshall Space Flight Center
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Julie Zingerman, United Technologies

panel members

